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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,422	07/31/2000	Lawrence G. Anderson	1269P14	4427

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EXAMINER

PAULRAJ, CHRISTOPHER

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/629,422

Applicant(s)

ANDERSON ET AL.

Examiner

Christopher G. Paulraj

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-87 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed on February 3, 2002 has been entered. Claims 1-87 are pending.

Claim Rejections - 35 USC § 102

2. Claims 62-87 are rejected under 35 U.S.C. 102(b) as being anticipated by Maag et al. (WO 98/40170) for the reasons substantially set forth in paragraph 10 of the Office Action mailed October 3, 2002 (paper no. 8). The arguments that Applicants raise will be addressed in the Response to Arguments below.

Claim Rejections - 35 USC § 103

3. Claims 1-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maag et al. in view of Lutz et al. (U.S. Patent 5,077,083), ~~W~~ilt et al. (U.S. Patent 5,939,491), Kang et al. (U.S. Patent 6,245,833), Desobry (U.S. Patent 6,251,962), and Ohsawa et al. (U.S. Patent 6,207,235) for the reasons substantially set forth in paragraphs 12-17 of the Office Action mailed October 3, 2002 (paper no. 8). The arguments that Applicants raise will be addressed in the Response to Arguments below.

Response to Arguments

4. Applicants' arguments with respect to the pending claim rejections have been fully considered but are not found persuasive for the reasons set forth below.

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5. With respect to independent claim 62 (as amended), Applicants argue that Maag teaches away from the use of vinyl groups in the thermally curable component (Maag's "system A"). While this may be true with respect to system A), the system B), as disclosed by Maag, is "curable under the action of high-energy radiation by free-radical polymerization of olefinic double bonds," and therefore, by its very definition, includes vinyl groups. Epoxy resin methacrylates are listed among the prepolymers and oligomers that can be used in system B) (see Maag et al., col. 8, line 9). It is known in the art that epoxy resins are thermally curable (see Alger, Polym. Sci. Dic., 180-81, attached). Therefore, the Examiner takes the position that the epoxy resin methacrylates disclosed by Maag et al. can satisfy the requirement of the claimed component b) comprising both a thermally curable reactive functional group and at least one vinyl group.

6. With respect to independent claim 76, Applicants argue that Maag et al. does not teach or suggest a composition comprising both an ultraviolet radiation curable functional group and at least one thermally curable functional group in the same material. For the same reasons as pointed out in the above paragraph, the Examiner takes the position that the epoxy resin methacrylates disclosed by Maag et al. contain both an ultraviolet radiation curable functional group and at least one thermally curable functional group in the same material.

7. With respect to the rejections of the claims as being unpatentable over Maag et al. in view of Lutz et al., Applicants argue that the one skilled in the art would not have found it obvious to substitute or add Lutz's siloxanes into Maag's system B). Likewise,

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applicants argue that one skilled in the art would not have found it obvious to substitute or add Wilt's polysiloxanes into Maag's system A). At the outset, the Examiner would like to point out that the term "incorporate" used in the claim rejections, is intended, as its plain meaning would suggest, to mean that it would have been obvious to add the polysiloxanes into either component A) or B) of Maag's composition. Therefore, the arguments with respect to the substitution of system A) or B) with the prior art polysiloxanes are inapplicable and therefore moot.

8. Applicants argue that since Maag et al. requires that the weight percentage of components A) and B) add up to 100 wt. % of the system, adding a third active component would "run afoul" of this requirement. Additionally, they argue that one would have to increase the relative proportions of Maag's component B) to maintain the required C=C equivalent weight to compensate for Lutz's siloxanes. This line of reasoning is unpersuasive. Although Maag et al. requires that the total amount of system A) and B) add up to 100 wt. % of the total resin solids, the incorporation of a siloxane component into either system A) or B) would only add to the weight of system A) or B) accordingly. The total weight of system A) and B) would therefore remain 100% of the total resin solids. Other than the specifically required thermally curable and radically curable materials, Maag et al. leaves the scope of what additional ingredients may be incorporated into components A) and B) open-ended by the use of the term "comprise" (see, e.g., col. 7, line 63). Therefore the inclusion of polysiloxane components into those systems is not specifically precluded by Maag et al. With respect to the polysiloxanes disclosed by Wilt et al., Applicants argue that it would not

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have been obvious to incorporate them into Maag's system A) because they require at least one free-radically polymerizable double bond. This is unpersuasive because the polysiloxane according to formula (II) of Wiltz et al. requires only one double bond in the side chain R^a (when m=1, and R1 is ethylene). The Examiner does not consider this double bond to be a substantial amount of free-radically polymerizable double bond because free-radical polymerization generally occurs when there are C=C bonds in the main backbone of the polymer chain. That is not the case here because there is only a one double bond, in one side chain of the entire polymer, which would not substantially contribute to free-radical polymerization.

Conclusion

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Paulraj whose telephone number is (703) 308-1036. The examiner can normally be reached on Monday-Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.


cgp
April 10, 2003


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700